

TEXT OF COMMITTEE REPORTS

Committee Report #1

The **Health and Environment Committee** held a public hearing on Sept 27, 2018, at 3:00pm in the Sullivan Chamber.

The purpose of the hearing was to discuss stormwater management best practices and get an update on how Cambridge will be impacted by the EPA's new Municipal Separate Storm Sewer System (MS4) permit, which took effect on July 1, 2018.

Present at the hearing were Vice Mayor Devereux and Councillor Zondervan, Co-Chairs of the Committee; Councillor Carlone; Councillor Kelley; Councillor Mallon; Owen O'Riordan, Commissioner of Public Works; John Nardone, Deputy Public Works Commissioner; Jim Wilcox, Director, Engineering Services, Public Works Department; Catherine Woodbury, Project Manager, Public Works Department; Yilkal Berkeley and Yaser Samerraei, Public Works Department; Sam Corda, Managing Director, Water Department; Lee Gianetti, Communications and Public Relations Director; and City Clerk Donna P. Lopez.

Vice Mayor Devereux convened the hearing and explained the purpose. She stated that the hearing is being audio recorded privately. She stated that there is information about stormwater management on the Public Works Department website going back to 2007. She looked forward to learning more about stormwater management and improving water quality in Cambridge.

Commissioner O'Riordan stated that Cambridge has been working on adhering to the Clean Water Act and focusing on water discharged into the City's three main bodies of water. The City is subject to a variety of permits, and the City applies the MS4 permitting process across all areas.

Ms. Woodbury gave a presentation (ATTACHMENT A). She stated that in 1972 the Clean Water Act was passed, and before that there was a great deal of commercial discharge. She stated that in 1991 Cambridge was first regulated under the MS4 Phase I standards; in 1999 Cambridge became subject to the MS4 Phase II standards. Cambridge has been operating under this set of regulations until July 2018. The new permit regulations, which are stricter than the previous phases, went into effect July 1, 2018. She stated that Cambridge has combined area and separated systems regulated under Phase II of the MS4 permit. There are two areas of storm water distributions. She stated that one-third of the City drains to the Mystic River watershed.

This discharge eventually goes to Boston Harbor. EPA has identified that 55% of waterways are currently impacted by stormwater discharge. She stated that Cambridge is in the high red concentration area shown on the map on page 6. In 1995 the Charles River Initiative was launched, and it has improved the water quality in the river. In 1995 the EPA created a report card for the Charles River and gave it a grade of D based on state bacterial standards. By 2013, the grade was an A-. She stated that there has also been a slow improvement in the report card for the Little River and Alewife Brook. She stated that 485 common manholes have so far been separated in the City.

Ms. Woodbury spoke about illicit sewer connections that have been removed in the City. She stated that there is a major pipe inspection system in place. She highlighted the stormwater sampling that is done. She spoke about the completed sewer separation capital projects in Cambridge. Ms. Woodbury highlighted the Alewife Reservation Stormwater Wetland project that was completed in

2013. She explained the three plans that are required for stormwater control permits. For all developments, at least 80% Total Suspended Solids (TSS) and 65% Total Phosphorus (TP) must be removed from the site.

Vice Mayor Devereux asked what size project is subject to these regulations. Ms. Woodbury responded any project that affects 1 acre or more. Stormwater control permits are required for projects with at least 50,000 square feet, or 10 parking spaces. These projects also require a Planning Board Special Permit and, if a project is on a sensitive site, permission of the city engineer. Commissioner O'Riordan stated that the City has captured private single home properties.

Ms. Woodbury explained the 2016 requirements and the changes in the permit. She spoke about public education and outreach. She distributed brochures (ATTACHMENT B). She stated that it is important to share resources with different communities. She explained that Cambridge has four household hazardous waste collection days each year. In the Envision Cambridge planning, quantity and quality of stormwater is discussed. She stated that IDDE prohibits illegal discharge. She stated that once illicit discharges are identified they are removed. Under IDDE, investigations of water quality are performed through sampling, and complaints are addressed. There have been 5 automatic water sampling stations constructed throughout Cambridge to monitor stormwater improvements. She spoke about managing runoff from construction sites. Inspections are done for working construction sites and warning tickets are issued for violations. Over the years 90 warning tickets have been issued, as a way to educate the construction industry. The 5th minimum control mechanism is post-construction stormwater management. She stated that the City practices need to be identical to what is required of private construction sites. She stated that there are 6,000 catch-basin in the City and one-third of the catch-basins are cleaned annually. There have been 300 tons of debris cleaned out of the catch-basins each year. A video inspection is performed on pipes that have been cleaned. Tree plantings are incorporated into projects to help absorb and filter stormwater. She added that 150 municipal facilities are cleaned.

Ms. Woodbury highlighted important capital projects. She spoke about the new requirements for the permit. The original six requirements will be maintained, some with changes. The new permit prescribes the requirements that need to be met. The stormwater plan is due October 2018. She addressed the Total Maximum Daily Load (TMDL) requirements for the Charles River in the new permit. This provides 20 years to incrementally reduce phosphorous discharge. The City has 5 years to come up with a plan and then a Phase II plan needs to be evaluated and implemented. She explained that the City is beginning to develop a phosphorus discharge plan. She explained why phosphorus is a problem and identified the sources of phosphorus. She commented that most fertilizers are not phosphorus-free. Another change in the permit requires enhancement programs to address the water quality of limited waterbodies. This affects the Charles River and the Alewife Brook. There are changes in the 6 minimum control measures under the new permit. One change was providing enhanced messaging to the public. She stated that the use of road salt must be documented. Anywhere vehicles are stored, the City needs to come up with a stormwater pollution prevention plan.

Vice Mayor Devereux stated that this is more work and asked whether a need for more staff is anticipated. Commissioner O'Riordan stated the City's plan has been to stay ahead of the permit requirement deadlines. The City has a Phosphorus Control plan in place. The permits will be all be

reviewed and enforced by staff. He stated that Public Works has a highly professional staff and the City is ahead of where it needs to be.

Councillor Zondervan stated that stormwater pollution ends up in Boston Harbor and the sea grass is impacted by the pollutants. He stated that Cambridge's effort is helping the sea grass. He stated that the City gets criticized for promoting trees, but these natural resources are vital to control pollutants and improve the quality of life. It is not good to trade off trees in favor of other priorities. It is important to keep the tree canopy. He is concerned about the Little River and Alewife. There is sediment in these bodies of water that contributes to pollution, and he asked what can be done. Commissioner O'Riordan stated that dams mitigate the impact of pollutants to water bodies, but damming the river makes it so that they cannot be flooded. Dams impact the Alewife and the Charles River. There was discussion by DCR ten years ago that went nowhere. There is no plan to do remedial work by the state to clean the Alewife. Councillor Zondervan asked about warning tickets to construction crews and inquired whether there is no other action available other than a warning. Commissioner O'Riordan stated that permits have been withdrawn in the past and their work has been stopped. Councillor Zondervan asked about street cleaning and whether driving diesel trucks around City causes more environmental damage than benefit, what with the number of cars towed to make space for street cleaning.

Commissioner O'Riordan stated that Cambridge has the best street cleaning programs; the City cleans the streets for nine months per year and drivers announce street cleaning on loudspeakers. Cars are not towed unless it is absolutely necessary. He stated that the tow yards are disappearing in the City. Councillor Carlone stated that in Manhattan cars needed to move to alternate sides of the street every day because streets are cleaned three times a-week. Councillor Zondervan suggested looking at towing. He spoke about the catch basins and the odor. Commissioner O'Riordan stated that Councillor Zondervan lives in a combined sewer separation area. He stated that during dry periods the snout is exposed, so a smell is sometimes present. There is deodorizer in place that works to eliminate the smell. Councillor Zondervan asked if there is a plan to separate all combined sewers. Commissioner O'Riordan responded that the goal is to do this, but now there are areas in need of sewer separation where it will be challenging to achieve the necessary quantity and quality of water.

Councillor Carlone asked why the illicit connections that have been removed are concentrated in particular blocks and areas, referring to page 9 of the presentation. Are the connections old or current? Mr. Wilcox stated that most of the manhole system was part of the 1930 preservation act. Many illicit connections were removed in large batches, and there are fewer current ones to remove. Councillor Carlone asked whether the Alewife wetlands built by the City with MWRA is a prototype. Commissioner O'Riordan spoke about the North Point wetland, Discovery Park and the Strata Center. These examples should be considered by large developers. Councillor Carlone asked how TSS is reduced in stormwater control. Ms. Woodbury stated that (TSS) total suspended solids is reduced through measures such as the street sweeping program. Councillor Carlone noted that illicit detection is ongoing and asked whether it is worked on when it is found. Mr. Wilcox stated that illicit detection is a 20-year program and it is done manhole by manhole, through collecting debris. He explained that samples are taken and sent to a lab. Councillor Carlone asked about porous asphalt and how often it needs to be cleaned up. Mr. Wilcox spoke about quality control

with asphalt. It should not be overly compacted when installed, so that water can penetrate it more easily. Then it is swept with a vacuum at the end of installation.

Councillor Mallon asked whether the City offers a rebate for a sump pump for work done by the City. Commissioner O’Riordan responded in the negative. She asked what the number one source of phosphorus contamination is. Commissioner O’Riordan responded that fertilizers are the primary source of phosphorus. Councillor Mallon asked whether post-construction inspections are done before occupancy. Mr. Wilcox stated that inspection is done before occupancy and there is a follow-up inspection to confirm that everything is installed properly, according to best management practices.

Councillor Kelley spoke about reviewing towing cars and fines. He spoke about the watershed and the complexity of the permitting process, which concerns multiple towns. Mr. Corda stated that the example is set in Cambridge and followed in Waltham, and current water management systems are improved. Councillor Kelley stated that the City only comments on the permit requests made by private entities. He stated that there must be a greater discussion on the use of salt and where it is used. As projects move forward in Alewife, he asked whether the City will get better stormwater infrastructure than what is there currently. Commissioner O’Riordan stated that prior to the sewer separation project in East Cambridge, water was discharged to Alewife, so since then there has been a profound reduction. This stormwater is cleaner and it will be monitored before and after storms to illuminate the improvements as part of the wetland plans. Councillor Kelley noted that there will be continued development in Alewife and the Quadrangle and it ends up being no net change in water quality. He asked whether we need to revisit these developments and what is the current system being built. Commissioner O’Riordan stated that all developments are required to meet requirements for stormwater quality and quantity. Phosphorus is required to be reduced and developers are required to look at sundry stormwater. Councillor Kelley asked about removing asphalt and replacing it with grass or gravel on private or public property. Commissioner O’Riordan stated that is part of the Preparedness Plan to see what the additional benefit is and then 50% repaving would be required. He stated that putting in proper drywall would achieve the same. He stated that the City will eventually be forced to look at private property as the permit moves toward the 20th year.

Vice Mayor Devereux suggested the parking lot at the Fresh Pond Mall could be a test site. Commissioner O’Riordan stated that this water drains into the site itself. Vice Mayor Devereux asked will porous asphalt be used for the Watertown Greenway path. Commissioner O’Riordan stated that the water will run off at that location. Vice Mayor Devereux asked what the education plans are to promote the use of phosphorus-free fertilizer. Ms. Woodbury stated that the EPA would like the public to be educated on the harmful nature of fertilizers with phosphorus as an ingredient and introducing some messaging would be a goal. Vice Mayor Devereux stated that she supports reducing salt use. Vice Mayor Devereux spoke about Little River, which is not under the City’s control. Commissioner O’Riordan stated that there are 3 branches that feed the Little River, and the Watertown and Belmont systems leak, which is problematic.

Vice Mayor Devereux opened public comment at 4:48pm.

Peter Valentine, 37 Brookline Street, spoke about hurricane Sandy and spoke about energy fields. Where is the population and how does this affect things?

At 4:49pm Vice Mayor closed public comment.

Vice Mayor Devereux and Councillor Zondervan thanked all those present for their attendance.

The hearing adjourned at 4:50pm.

For the Committee,
Vice Mayor Jan Devereux, Co-Chair
Councillor Quinton Y. Zondervan, Co-Chair